

### NORDIC ELECTRICITY MARKET

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### WEATHER FORECAST VERY DRY AND FUELS RISING

Forecast to week 24:	
ENOFUTBLQ3-20	↗ Bullish (>0%)
ENOYR-21	↗ Bullish (>0%)
NP System	↗ Bullish (>0%)
NEDEC20	↗ Bullish (>0%)

Market signals			
	spot	Q3-20	YR-21
Hydrologic balance	→	↑	↑
Precipitation forecast	↑	↑	↑
Temperature forecast	↓	→	→
Spot	→	↓	↓
Production and transmission exch.	↓	→	→
Emissions allowance	→	↑	↑
Coal price	→	→	↑
German prices	→	→	→
Technical analysis		↑	↑

### FORECAST TO WEEK 24

#### POWER FUTURES

##### Front quarter

The weather forecast has turned very dry. Precipitation rates will be on the evaporation side until Thursday next week. The conditions will be returning close to normal right at the end of the two-week forecast period, but forecast reliability is low over such a long period. Temperatures will rise from the current normal level by almost 5 °C by the start of next week. Flow rates have taken a downturn due to the dry weather but will rise again as the weather turns warmer at the weekend. The hydro balance forecast has plummeted. We expect quarterly products to surge on the basis of the dry weather forecast.

##### Annual products

The dry weather forecast will also boost the front-year product and, due to the market mood, also other annual products. Annual products are also supported by the stronger emission allowances. OPEC+ agreed to extend the current output curbs until July, which has lifted oil prices and provided slight support for other fuel markets. The stock markets have remained stable despite today's European drop after last week's climb. We expect annual products to climb, pulled by the weather and the fuel markets.

#### SPOT MARKET

Flow rates have taken a downturn after last week's highs but are still clearly above normal. Flow rates will increase again at the weekend due to the warm weather. Wind power production will be very low until the middle of the week and close to normal for the rest of the week. The very dry weather will rapidly weaken the hydro situation, and the rising hydro valuation will begin to lift the spot price as soon as flow rates decrease. We expect the system price to rise slightly at the weekly level as flow rates calm down a little and to settle at an average of €4.5/MWh. The annual maintenance of the Olkiluoto 1 nuclear power plant unit ended on Sunday, and full capacity will be reached on Thursday. The maintenance of the interconnection between Finland and Estonia will also reduce the area price difference. Finnish wind power production will be weaker than normal throughout the week. We expect the Finnish area price to fall at the weekly level.

#### EMISSIONS

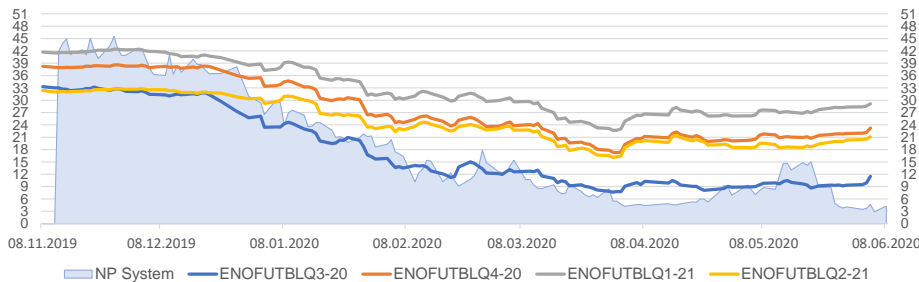
Emission allowance prices are currently on an uptrend, having climbed above the previous high. Emission allowance prices are at their highest level since the rapid drop seen in March. At the fundement level, however, demand for emission allowances is low, with emissions projected to drop by 400 Mt this year because of the coronavirus pandemic. Demand for energy is, however, returning to the levels seen before the start of the outbreak. The technical picture and sentiment may still lift emission allowance prices towards the €25/t level. However, any decline in stocks or fuels or any bad coronavirus news may pose a downward risk for emission allowances.

Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ3-20	5.6.2020	11.50	25.0%	2.30
ENOFUTBLQ4-20	5.6.2020	23.25	6.7%	1.45
ENOFUTBLQ1-21	5.6.2020	29.15	3.4%	0.95
ENOFUTBLQ2-21	5.6.2020	21.10	5.8%	1.15
ENOYR-21	5.6.2020	24.16	4.8%	1.11
ENOYR-22	5.6.2020	25.70	2.2%	0.55
ENOYR-23	5.6.2020	27.05	1.5%	0.40
ENOYR-24	5.6.2020	28.40	2.3%	0.65
ENOYR-25	5.6.2020	28.93	-0.3%	-0.10
NEDEC20	5.6.2020	22.85	6.8%	1.45
NEDEC20	5.6.2020	22.85	6.8%	1.45

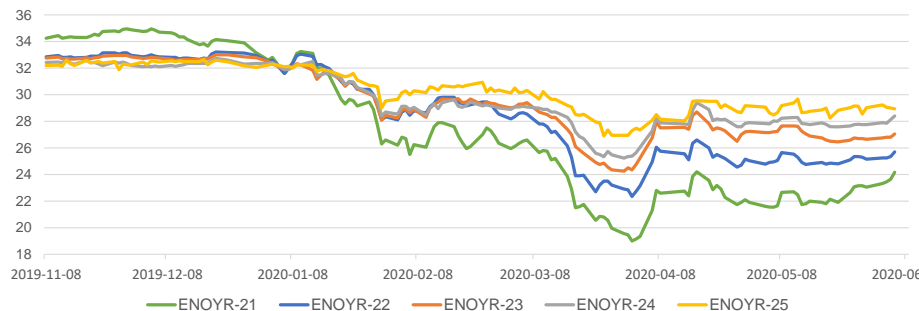
EPAD settlements			
5.6.2020 (€/MWh)	2021	2022	2023
SYHEL	9.08	5.03	3.93
SE1- NP System	-1.50	-2.25	-2.25
SE2 - NP System	-1.50	-2.25	-2.25
SE3 - NP System	1.25	1.35	1.35
SE4 - NP System	2.60	2.60	2.60

Week's spot price change				
Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	7.6.2020	3.13	-29.2%	-1.29
NP Area FI	7.6.2020	24.88	15.9%	3.42
NP Area SE1	7.6.2020	8.95	16.0%	1.24
NP Area SE2	7.6.2020	8.95	16.0%	1.24
NP Area SE3	7.6.2020	18.82	56.9%	6.83
NP Area SE4	7.6.2020	18.82	56.9%	6.83

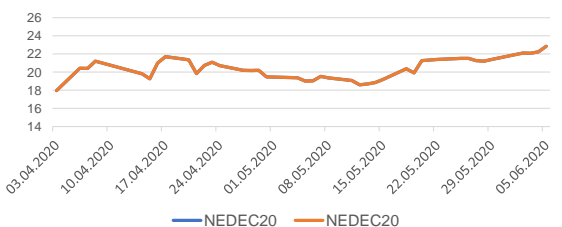
Quarters EUR/MWh (left), NP System EUR/MWh (right)



Years EUR/MWh



Carbon EUR/CO2 t



COMMENTS ON WEEK 23

**POWER FUTURES**

**Front quarter**

At the start of last week, the weather forecasts were clearly rainier than normal and emission allowance prices also fell on Monday as the Nordic power market was closed. However, as the week progressed, the weather forecasts got drier and emission allowances took a major upturn already on Tuesday and climbed until Friday. The front-quarter product opened bearish on Tuesday morning but reached an intraday climb to a level above that seen on Friday last week. For the rest of the week, the product continued to climb as the weather conditions turned dry, and on Friday the front quarter rose above €11/MWh, the highest quote seen since mid-March.

**Annual products**

With emission allowance having risen, the front-year product was also rising during the week and closed on Friday slightly above €24/MWh, a level close to the April high. Coal prices also took an upturn during last week and this, together with emission allowances, lifted annual product prices in Germany, which in part supported the Nordic market, too.

**SPOT MARKET**

Last week, the snow melting rate was likely to have been at its highest during this melting season and, consequently, flow rates rose to almost 3 TWh/day. As at the same time Norway has imposed significant transmission restrictions towards Central Europe as well as Sweden, the Southern Norwegian spot price has plummeted below €2/MWh. At the same time, the system price continued to fall and settled slightly above €3/MWh, which is the lowest ever level. Nuclear power plant maintenance in Sweden and the transmission restriction between Norway and Sweden lifted prices in Swedish price areas considerably last week. As at the same time the annual maintenance of the Olkiluoto 1 unit continued in Finland, the Finnish area price rose considerably to almost €25/MWh at the weekly level. Consequently, the area price difference turned out large, which was also to be expected for the first week of the month.

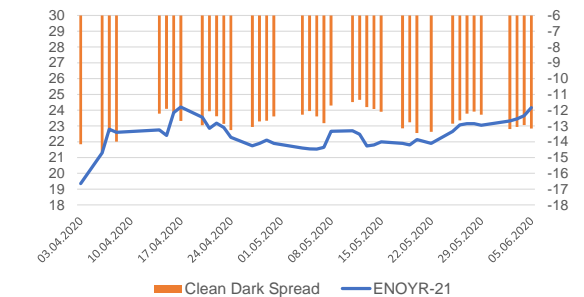
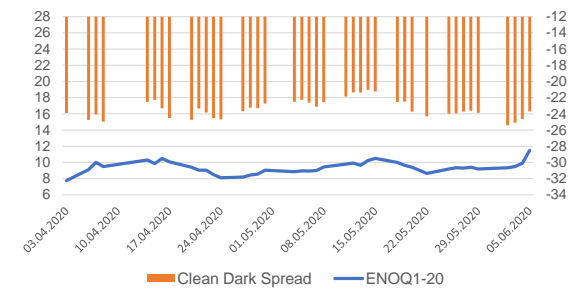
**EMISSIONS**

Last week, emission allowance prices rose. The prices were pushed up by the increases in coal and natural gas prices due to production disturbances, and by the strong oil price. Emission allowance prices have also been strongly following the direction of the stock markets, and the stock markets have remained bullish following the economic stimulus measures. On Friday, emission allowance prices rose above the important resistance level of €22.55/t and are technically on an uptrend.

Indicator	ENOFUTBLQ3-20	ENOYR-21
Coal-fired production	78 %	90 %
Coal price	78 %	73 %
Gas price (NBP)	78 %	76 %
German price level	6 %	85 %
Spot	94 %	85 %
Crude oil Brent	71 %	84 %
Water reservoirs	32 %	23 %
EUR/USD FX rate	26 %	29 %
Temperature	8 %	5 %
Precipitation	16 %	13 %

**Definition**  
The above figures measure the ability of market determinants to describe the price changes occurred in last 6 months. The affect is measured as Coefficient of Determination\*. Each variable is evaluated independently. We use a color scale to demonstrate efficacy, green (strong), yellow (moderate), red (weak)

Forecast history	23	Chg	22	Chg
ENOFUTBLQ3-20	↘	25.0%	↗	6.4%
ENOYR-21	↘	4.8%	↗	5.3%
NP System	↘	-29.2%	↘	-53.7%
NEDEC20	↔	6.8%	↗	0.0%



DETERMINANTS AFFECTING THE MARKET ON WEEK 24

**RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY**

Forsmark 1 (988 MW), 3.-8.6.2020, maintenance, in use 0 MW  
 Forsmark 2 (1120 MW), 3.5.-26.6.2020, maintenance, in use 0 MW  
 Olkiluoto 1 (890 MW) 24.5-7.6.2020 maintenance, in use 0 MW, 8.-11.6.2020 in use 160-790 MW  
 Ringhals 3 (1063 MW) 22.4-2.7.2020 maintenance, in use 0 MW  
 Ringhals 1 (881 MW), 13.3.-30.9.2020 maintenance, in use 0 MW

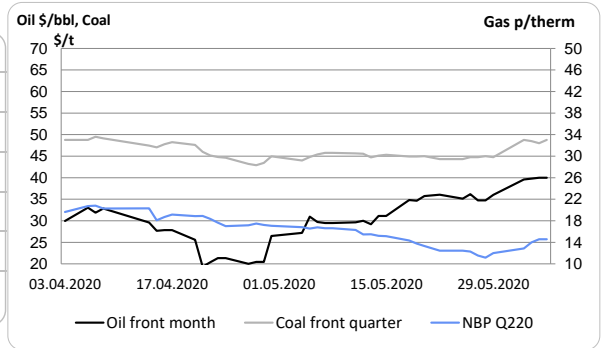
FI-EE (1016 MW), 8.-12.6.2020 maintenance, in use 658 MW

- Nordic nuclear power plants are currently operating at a capacity utilization rate of 59%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 6 % of the maximum

**AVERAGE SPOT PRICE AND EPAD**

Price area (€/MWh)	2012	2013	2014	2015	2016	2017	2018	2019	2020*
NP System	31.20	38.10	29.60	21.00	26.91	29.41	43.99	38.94	11.55
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	5.10	10.83
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	0.58
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	0.58
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	4.21
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.86	6.33

\*Average for period between 1.1.2020-8.6.2020.



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